

Award Information

Agency: Department of Defense
Branch: Missile Defense Agency
Contract: N/A
Agency Tracking Number: 19611
Amount: \$53,694.00
Phase: Phase I
Program: SBIR
Solicitation Topic Code: N/A
Solicitation Number: N/A

Timeline

Solicitation Year: N/A
Award Year: 1993
Award Start Date (Proposal Award Date): N/A
Award End Date (Contract End Date): N/A

Small Business Information

[MITCHELL/STIRLING MACHINES/SYSTEMS, INC.](#)

2210 Sixth Street, Berkeley, CA, 94710

DUNS: N/A

HUBZone Owned: N

Woman Owned: N

Socially and Economically Disadvantaged: N

Principal Investigator

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Research Institution

N/A

Abstract

A COMPACT TWO-STAGE SIBLING CYCLE COMPRESSOR/EXPANDER COMBINING THE SIMPLICITY OF THE PULSE TUBE WITH THE PERFORMANCE OF THE LINEAR STIRLING IS PROPOSED FOR USE IN CRYOCOOLERS. THE PHASE I OBJECTIVES WILL BE TO FABRICATE AND INSTALL THE SECOND STAGE, AND TO MODEL AND PLAN A CRYOCOOLER INCORPORATING A LINEAR-DRIVEN TWO-STAGE SIBLING CYCLE COMPRESSOR/EXPANDER TO BE BUILT AND TESTED IN PHASE II. THE GOALS FOR PHASE II ARE TO DESIGN AND BUILT A CRYOCOOLER INCORPORATING A TWO-STAGE SIBLING CYCLE COMPRESSOR/EXPANDER AND A LINEAR DRIVE. PERFORMANCE GOALS ARE FIRST-STAGE TEMPERATURE OF 75 K AND A SECOND-STAGE TEMPERATURE OF 30 K. MODELING OF A SINGLE-STAGE CRYOCOOLER WITH SIBLING COMPRESSOR/EXPANDER INDICATES ADEQUATE REFRIGERATION TO ACHIEVE THOSE GOALS.

* Information listed above is at the time of submission. *